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[redacted] (b)(2)

China: Nuclear Missile Force Operational Procedures (U)

A Defense Research Assessment

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DDB-1000-141-89-SAO

June 1989

P0021532

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China: Nuclear Missile Force Operational Procedures (U)

A Defense Research Assessment

This is a Department of Defense Intelligence Document Prepared by the Eastern Division, Directorate for Research, Defense Intelligence Agency

[redacted] (b)(2), (b)(3)

Information Cutoff Date: May 1989

[redacted]

[redacted]

DDB-1000-141-89-SAO

(b)(2) (b)(2)

TCS-60038[illegible]-88

China: Nuclear Missile Force Operational Procedures (U)

KEY JUDGMENTS

~~(S/WNF)~~ Survivability and retaliation are the key strategic principles for China's nuclear force. They are derived from Chinese strategic theory and from the size and characteristics of the nuclear force that Beijing has created:

- China's nuclear force basically consists of land-based ballistic missiles, most of which are CSS-2 IRBMs.

(b)(1)
1.4(A,H)

[redacted]

(b)(1)
1.4(A,H)

- [redacted]
- [redacted]
- [redacted]

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(b)(1) 1.4(a) (b) [redacted]

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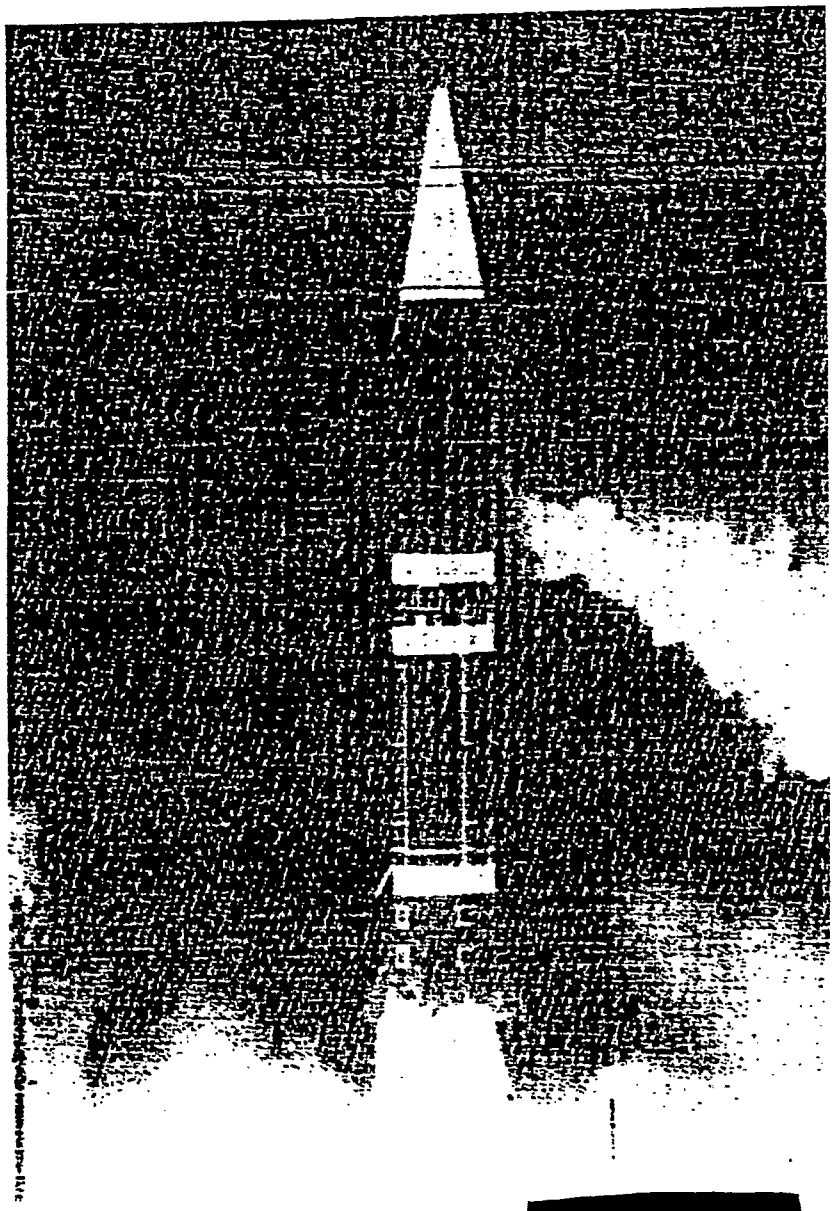


~~(S, WN)~~ *Launch of an Improved CSS-2 IRBM* [redacted]

(b)(1) 1.4(a)(h)

China: Nuclear Missile Force Operational Procedures (U)

Background

~~(S WNF)~~ China currently has three types of surface-to-surface ballistic missiles (SSMs). Most are CSS-2 mobile intermediate-range ballistic missiles (IRBMs), but the country also has a few CSS-3 limited-range intercontinental ballistic missiles (ICBMs) and a small but increasing number of CSS-4 full-range ICBMs. The CSS-4 can reach targets anywhere in the United States, as well as in the Soviet Union. China's small SSM force is most suitable for limited retaliatory strikes against strategic, soft, area targets (figure 1).

(b)(1) 1.4(A) (H)

[redacted]

(b)(1) 1.4(A) (H)

[redacted]

Doctrinal Considerations

Missile Force Strategic Principles: Survivability and Retaliation

~~(S WNF)~~ *Survivability.* Because China's missile force is very small compared to those of the United States and Soviet Union, survivability is an important factor in its deterrent effect. Emphasis on survivability helps to ensure that at least a small portion of China's strategic force would escape a preemptive attack and retaliate against the aggressor's own strategic targets.

~~(S WNF)~~ The Chinese have incorporated survivability into their overall force deployment and operational plans.

[redacted]

(b)(1) 1.4(A) (H)

Most of China's ballistic missiles are mobile CSS-2 IRBMs.

[redacted]

~~(S WNF)~~ [redacted] The CSS-3 limited-range (7,000-km) ICBM was first de-

(b)(2)

Pg 2 is denied in full

ployed in elevate-to-launch silos. Later, the Chinese designed a rollout-to-launch system for the CSS-3.

(b)(1)
1.4(A)
(H)

[redacted]

Figure 3. (U) SSM Basing Modes and Options to Enhance Survivability.

(b)(2)

[redacted]

[redacted]

[redacted] Upon strategic warning, command elements would relocate to hardened primary and alternate facilities, or would disperse to mobile command facilities in the field.

[redacted]

~~(S WNF)~~ One current high priority of the Chinese Strategic Rocket Force (CSRF) is ensuring the survival of command, control, and communications. [redacted]

~~(S, WNF)~~ China's survival strategy also places a premium on launch unit generation, reconstitution, and operations under hostile conditions. In recent years, the Chinese have conducted numerous training exercises and actual launches under increasingly realistic simulated combat conditions

[redacted]

~~(S-WF)~~ *Retaliation.* China has a no-first-use nuclear doctrine. It does not have an early warning system that can provide reliable tactical warning of attack [redacted] and it probably would have great difficulty affording one. [redacted] (b)(1) 1.4(c) (b)(5)

[redacted]

~~(S-WF)~~ For these reasons, the Chinese have made a virtue of necessity by concentrating on survival, generation and reconstitution, and retaliation. They plan in advance to retaliate against soft or area targets [redacted] that cannot be easily moved or protected. Such targets can be successfully attacked to achieve strategic military and political objectives almost regardless of the length of time delay. [redacted] (b)(5) (b)(1) 1.4(c)

[redacted] (b)(1) 1.4(c)

war. Past Chinese Communist involvement in conflict shows a complex but consistent pattern: threat — pause — action — pause for effect — further action as necessary. The varying response times of China's missiles easily lend themselves to this strategy.

~~(S-WN)~~ The CSS-4 full-range ICBM is the ultimate Chinese retaliatory weapon, because it can reach the capitals and all major population centers of the United States or the Soviet Union.

Likewise, the CSS-3 silo-based force —

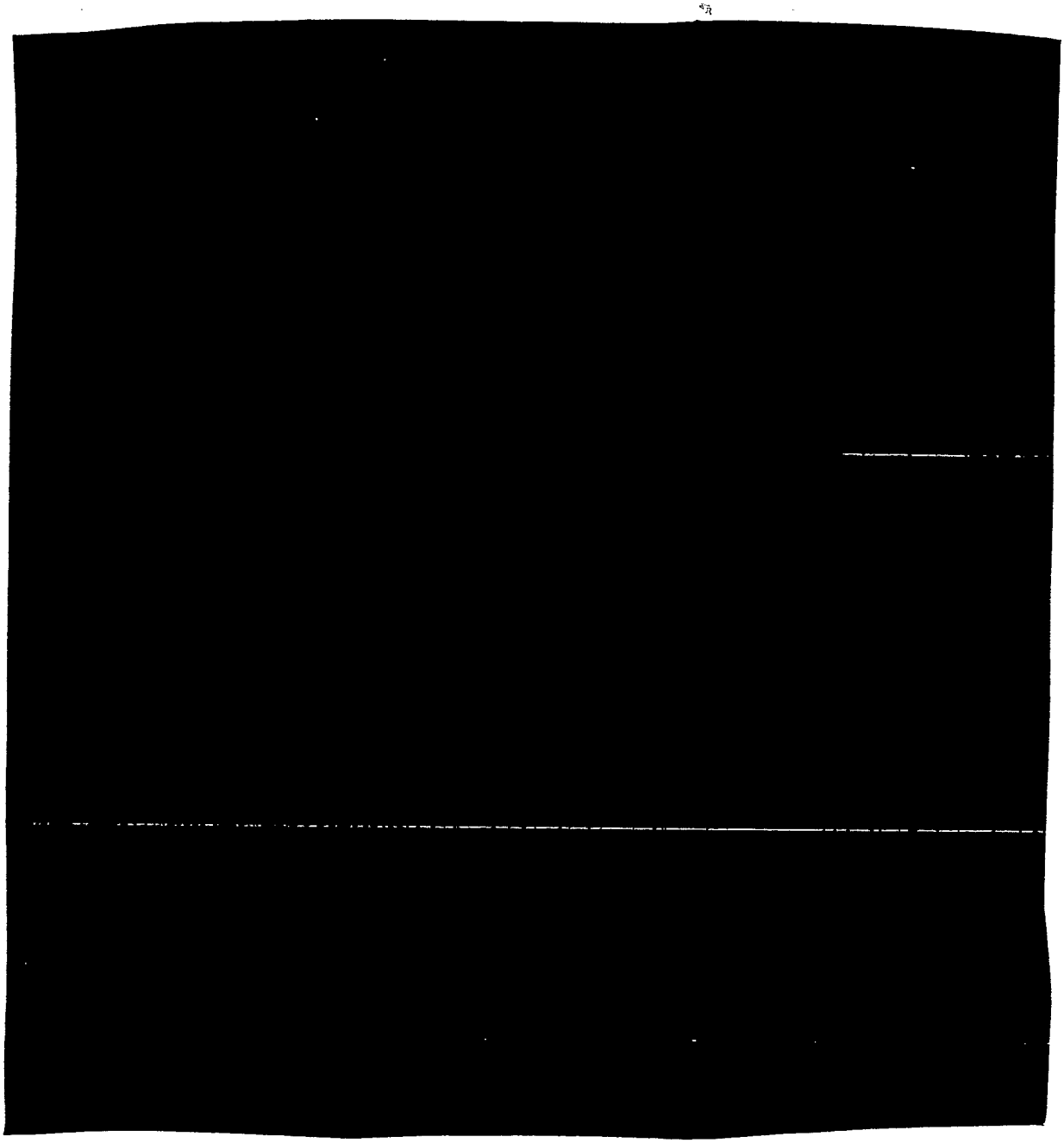
— can react in a relatively short time and can reach targets in the entire western USSR and central Europe.

Basic Attack Planning Principles: Launch in Waves and Concentration

~~(S-WN)~~ *Launch in Waves.* For technical reasons, wave launches are appropriate for the CSRF.

~~(S-WN)~~ Aside from technical characteristics of its force, China has military and political reasons to adopt a launch-in-waves strategy. Chinese military writings emphasize the political nature of

~~(S-WN)~~ Many CSS-2 units, and probably the CSS-3 rollout units, will probably be directed to disperse for survival and remain concealed or mobile for an extended time. This will allow Chinese leaders to use the threat of successive retaliatory strikes to achieve their desired political and military objectives.



~~(S RVA)~~ *Concentration.* Although it is a basic planning principle, concentration of force applies to the CSRF only in special situations. The most obvious application of this principle is in planning to degrade and penetrate ABM defenses in order to attack Moscow. The chances of penetrating the Moscow ABM defense are increased with a concentrated and coordinated attack that strikes at missile warning radars, target-acquisition radars, and fire-control radars virtually simultaneously, while attempting to overload the fire-control capability with warheads and penetration aids. [redacted]

1.4(c)

[redacted]

1.4(c)

Targeting Objectives and Constraints

~~(S-WNF)~~ Characteristics of the CSRF make some types of targets and some targeting plans more suitable than others. The small size of the force, particularly the tiny ICBM component, rules out any plans that require saturation of a large number of targets. [redacted]

1.4(c) (4)

Missiles that are in soft facilities, or in facilities near likely invasion routes, must either be fired or moved quickly in the event of an attack. [redacted]

~~(S-WNF)~~ One very feasible target objective would be to strike major urban industrial areas within reach of the CSS-2 force. This would include Japan, Korea, Taiwan, the Philippines, Southeast Asia, India, and the Soviet Union east of the Urals. China can virtually destroy the economy of any area within reach of the CSS-2s. A drawback, however, is that China cannot reach the western heartland of the USSR or any territory of the United States with the CSS-2s, which make up the bulk of its force.

~~(S-WNF)~~ Another very feasible target objective would be to hit strategic bases of the United States and USSR within range of the CSS-2 force. This would be limited to soft, area targets such as airfields, major military and naval bases, major depots and lines of communication, and major force concentration points that can be predicted far enough in advance for targeting purposes.

(S-WNF) A much more difficult targeting objective would be to hold hostage the political centers of the two superpowers. This requires ICBMs in either case — limited-range (CSS-3s) for the USSR and full-range (CSS-4s) for the United States. [redacted]. A severe limit to achieving this objective in the Soviet Union is the ABM system dedicated to the defense of Moscow.

(S-WNF) Penetration of the Moscow ABM system is problematic at best for the Chinese; Beijing's greatest chance of success would require a sophisticated plan to bring maximum force to bear on all vulnerable components of the system. [redacted]

(1.4(c) (1f)

[redacted]

[redacted]

Unit Operations

CSS-2 IRBM

[redacted]

[redacted]

(S-WNF) The CSS-2 (figure 15) is a mobile system; all essential components and support equipment are transportable by rail or road. Normally, a fixed pad is required for launch. [redacted]

[redacted] Their launchers are at hardened facilities with collocated launch pads [redacted]. These units are intended to survive an attack, even a surprise attack, and then to carry out their mission. Although equipped with mobile systems, they probably are prepared to launch from the collocated pads against the preplanned targets [redacted]

1.4(C) (1f)

[redacted]

Pgs. 11-14 are denied in Full.

1.4(c)
(H)

CSS-3 ICBM

(~~S-WNF~~) The CSS-3 limited-range ICBM force

42 USC
2161 (b) (1) (D)

(~~S-WNF~~) The CSS-3 rollout launch units are inherently mobile

The launchers will be dispersed from the bases on warning and will proceed to rollout sites with usable pads when ordered to launch

Pgs. 16-17 are denied in Full

CSS-4 ICBM

~~(S WNF)~~ The CSS-4 full-range ICBM force currently consists of [redacted] operational launchers, which are silos similar in concept to the US Titan II system [redacted]

[redacted]

[redacted]

42 USC 2162(a) RD

[redacted]

[redacted]

Trends in Missile Unit Operations

~~(TS)~~ In 1986, the Second Artillery Corps took steps, resulting from a series of previous initiatives, to increase the capability of its launch units, while also reducing personnel. It cut back administrative support billets and created operational billets [redacted]

[redacted] The Chinese openly reported a ceiling on the total staffing of the Second Artillery Corps, but the recent retirement of the CSS-1 MRBM from the force cannot provide all the operational personnel needed for the new deployments.

[redacted]

- [redacted]
- [redacted]

Pg. 19 is denied in Full.

[redacted]

[redacted]

- Continuing evidence of a reorganization in the CSRF, either to increase operational efficiency, to emphasize political control and indoctrination, or to parallel in a superficial way the fundamental restructuring taking place in the PLA ground forces. The most recent CSRF change involved upgrading the status of political commissars at regimental level, probably part of the process to redesignate all regiments as brigades

[redacted]

Outlook

(~~S-WNF~~) Maturation within the CSRF will be evident in the growth of operational capability, particularly as indicated by the translation of innovative doctrine to actual training and performance in the preponderant CSS-2 units.

[redacted]

(~~S-WNF~~) The development of coordinated and responsive operational plans will continue. This will reflect China's emphasis on military effectiveness, as well as on political signaling and gross deterrence objectives for its strategic missile force.

(~~S-WNF~~) The expected introduction of solid-fueled systems may be revolutionary, rather than evolutionary, from the standpoint of operations as well as command, control, and communications.

[redacted]

Appendix A

Chinese Strategic Rocket Force Organization and Deployment (U)

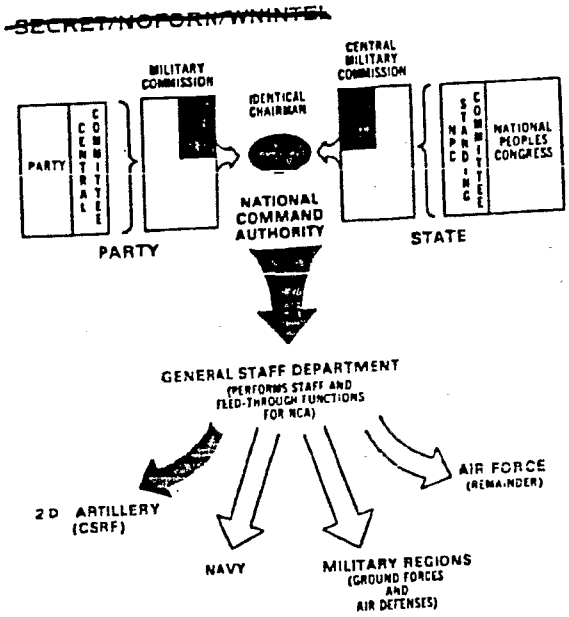


Figure 24. (~~TSU~~) Chinese National Command Authority. The actual command and control of China's nuclear forces is in the hands of the de facto national command authorities, likely emanating from the senior-level membership group of the Military Commission of the Chinese Communist Party Central Committee and being implemented through the Chief of General Staff of the PLA (i.e., direct to the subordinate 2d Artillery commands — Army (Base) or skip-echelon to regiments, as required).

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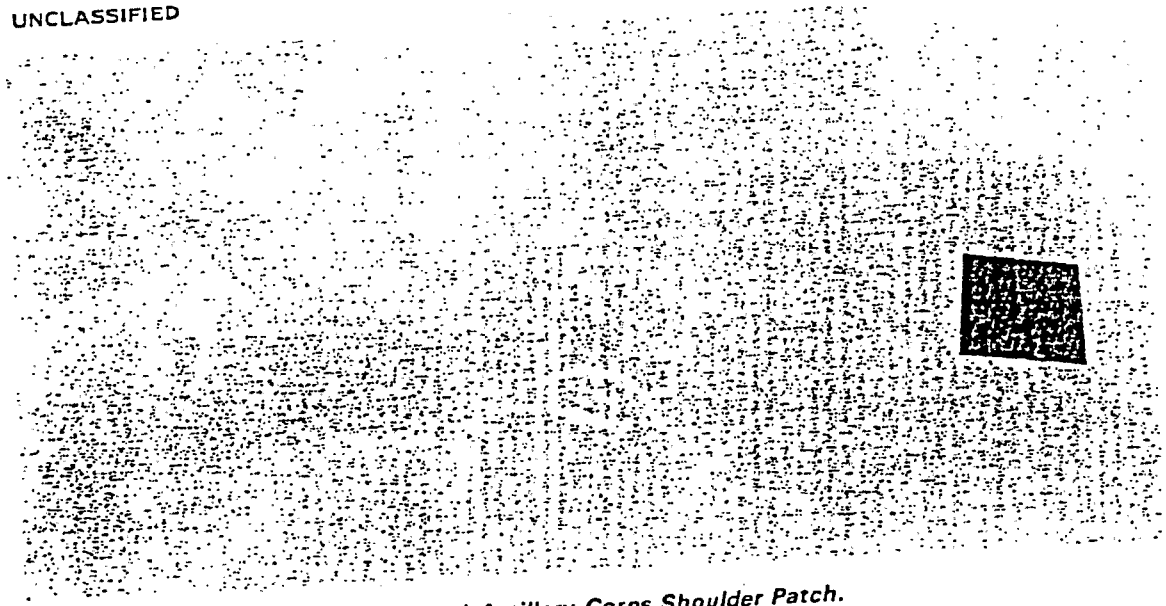

Figure 25. (U) Probable PLA Second Artillery Corps Shoulder Patch.

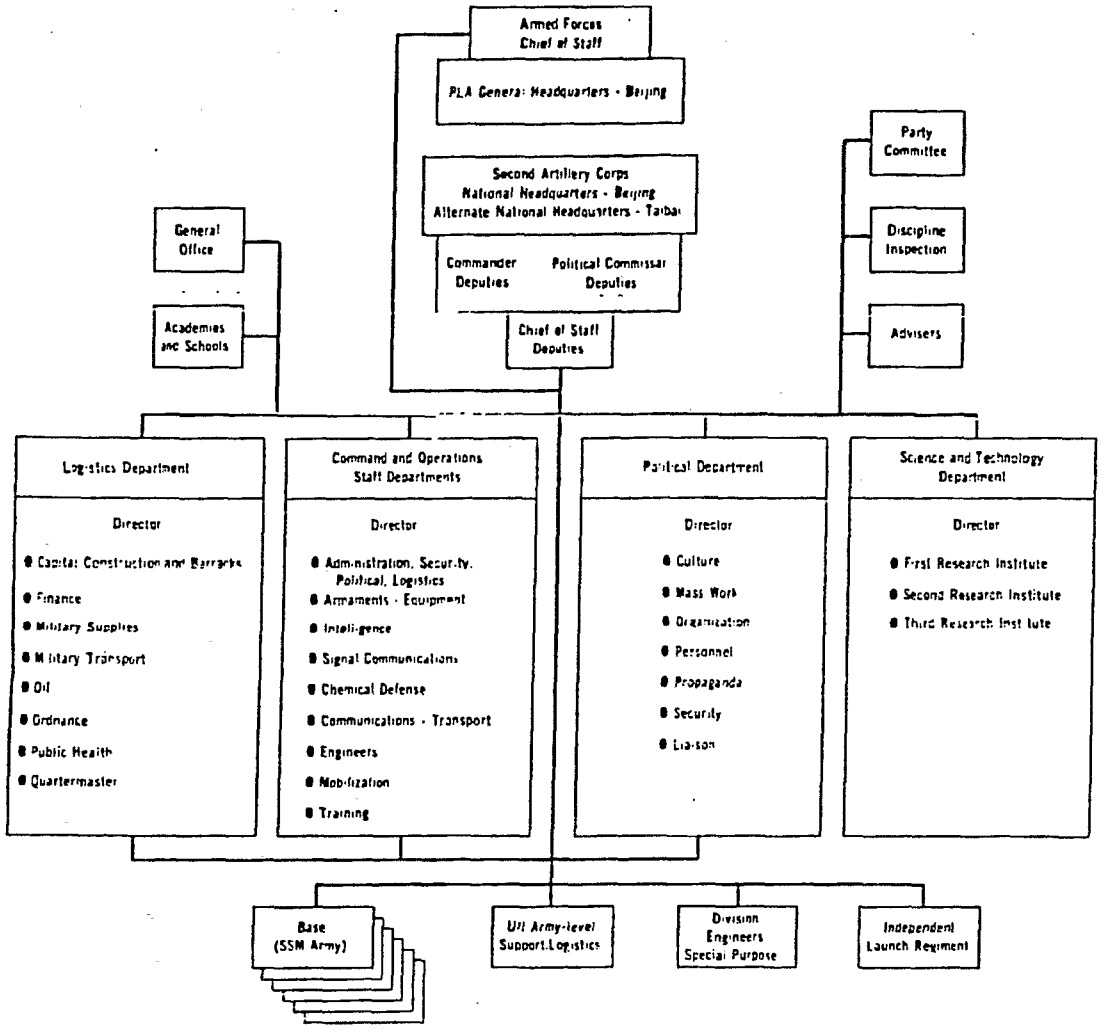

Figure 26. (U) Chinese PLA Second Artillery Corps National-Level Command Organization.

Pgs. 23-28 are denied in full

Appendix B

CSRF Readiness Conditions (U)

CSS-2 IRBM/Soft Basing

(Field Garrison; Launch Complex Garrison; Soft Storage at a Hardened Launch Site Garrison)

Day-to-Day Readiness

- Airframe on transporter in missile storage/checkout building [redacted]
- Empty transporter-erector in second bay of missile storage/checkout building.
- Empty propellant transporters and transfer vehicles, [redacted] and other ground support equipment (GSE) and general purpose vehicles in normal unit storage areas.
- Unit personnel following normal duty and training schedule, occasionally conducting field training.
- Missile airframe, systems, and monitoring and control consoles and equipment undergoing periodic checkout.

[redacted]

HOLD TIME: Indefinite (many weeks).

E.O. 12958 Sec. 1.4(c) 1.4(c)

Lowest Level of Alert

- Airframe on transporter in missile checkout facility/tent near launch site.
- [redacted]
- Empty transporter-erector present.
- Propellant transfer vehicles and loaded propellant transporters present.
- Other GSE and general purpose vehicles present.
- Communications established with brigade/regiment command post or field command post.
- Missile airframe, systems, and monitoring and control equipment undergoing checkout.
- Unit personnel mobilized, available personnel bivouacked or housed near launch site, equipped with personal combat and protective gear, performing auxiliary defensive duties (digging positions, etc.).

1.4(c)(H)

[redacted]

~~SECRET/WNINTEL~~

[redacted]

Intermediate Level of Alert

- Missile erected on launch stand. Propellants loaded. Transporter-erector used as work platform.
- Umbilicals attached.
- Missile and guidance set aligned, gyroscopes running.
- Subsystem checkouts complete, crew monitoring status.

[redacted]

1.4(A)

Highest Level of Alert

- Missile erected on launch stand, propellants loaded, final guidance alignment completed, pad and apron cleared.
- Umbilicals attached.
- Guidance set aligned and ready, gyroscopes running.
- System checkouts and final checks complete, crew monitoring status, prepared to launch.

[redacted]

~~SECRET/WNINTEL~~

CSS-2 IRBM/Hardened Basing

(Launch Site Garrison)

Day-to-Day Readiness

(See: Lowest Stage of Alert)

Lowest Stage of Alert

- [redacted]
- Propellants stored in tanks in propellant storage caves bunkers at launch site [redacted] Propellant lines (if present) checked out, filled with inert nitrogen gas, and sealed.
- [redacted]
- Missile airframe, systems, [redacted] and monitoring and control equipment undergoing checkout.
- [redacted]

(1.4(c))

Intermediate Level of Alert

- Missile erected on launch stand. Propellants loaded. Transporter-erector used as work platform.
- Umbilicals attached.
- [redacted]
- Subsystem checkouts complete; crew monitoring status.

1.4(c) (H)

[redacted]

~~SECRET WNINTEL~~

Highest Level of Alert

- Missile erected on launch stand, propellants loaded, final guidance alignment completed, pad and apron cleared.
- Umbilicals attached.
- Guidance set aligned and ready; [redacted]
- System checkouts and final checks complete, crew monitoring status, prepared to launch.

1.4(c) (H) [redacted]

CSS-3 ICBM/Silo, Hardened Basing

[redacted]

Day-to-Day Readiness

(See lowest level of alert)

Lowest Level of Alert

EO 12958 Sec. 1.4 h.

- Missile stages and [redacted] vertical on launch stand on elevator inside silo, silo door secure.
- Umbilicals and probably propellant loading lines attached to missile.
- Guidance set installed, missile and guidance set aligned and programmed to most likely target. [redacted]
- Propellants stored in tanks in tunnels adjacent to silo.
- Missile airframe, systems, warhead, and monitoring and control equipment undergoing checkout.

1.4(A)(c) (14)

- [redacted]
- [redacted]

[redacted]

Intermediate Level of Alert

- Missile inside silo. Propellants loaded. Work platforms may remain in place. Silo door secure.
- Umbilicals attached.
- Missile and guidance set aligned. [redacted]
- Subsystem checkouts complete; crew monitoring status.

[redacted]

[redacted]

~~SECRET/WNINTEL~~

1.4(A)(c)(H)

Highest Level of Alert

- Missile raised to surface, elevator locked. Propellants loaded. Final guidance alignment complete.
- Umbilicals attached.
- Guidance set aligned and ready, [redacted]
- System checkouts and final checks complete, crew monitoring status, prepared to launch.

[redacted]

[redacted]

~~SECRET/WNINTEL~~

CSS-3 ICBM/Rollout, Hardened Basing

[redacted]

Day-to-Day Readiness

(See lowest stage of alert)

Lowest Stage of Alert

EO 12958 Sec 1.4(c)

- Missile stages and [redacted] horizontal on [redacted] erector
- Propellant transfer vehicles available.
- [redacted]
- Launch stand on transporter, cherrypicker or truck-mounted crane, alignment van, and prime mover stored with missile.
- Missile airframe, systems, warhead, and monitoring and control equipment undergoing checkout.
- [redacted]

1.4(A)(C) (H)

[redacted]

Intermediate Level of Alert

- Missile erected on launch stand. Propellants loaded. Cherrypicker standing by for use by crew.
- Umbilicals attached.
- Missile and guidance set aligned, gyroscopes running.
- Subsystem checkouts complete, crew monitoring status.

[redacted]

[redacted]

~~SECRET/WNINTEL~~

Highest Level of Alert

- Missile erected on launch stand. Propellants loaded. Final guidance alignment completed. pad and apron cleared.
- Umbilicals attached.
- Guidance set aligned and ready. [redacted]
- System checkouts and final checks complete. crew monitoring status. prepared to launch.

[redacted]

[redacted]

1.4(a)(c)(d)

~~SECRET WNINTEL~~

CSS-3 ICBM/Rollout, Soft Basing

[redacted]

Day-to-Day Readiness

EO 12958 Sec 1.4h

- Airframe stages on stage transporters in missile storage/checkout building. [redacted]
- Empty rollout-erector halves in second bay of missile storage/checkout guilding [redacted]
- Empty propellant transporters and transfer vehicles, [redacted] and other GSE and general purpose vehicles in normal unit storage areas.
- Unit personnel following normal duty and training schedule, occasional field training.
- Missile airframe, systems, and monitoring and control equipment undergoing periodic checkout.

1.4(A)(c)(H) [redacted]

Lowest Level of Alert

[redacted]

Using Site Facilities:

[redacted]

1.4(A)(c)(H)

- Propellants may be available in hardened storage, or trucked to site with a propellant vehicle set.
- Launch control center, site power and water, and site communications may be usable; equivalent equipment will be transported with the unit.

[redacted]

EO 12958 Sec 1.4h

- Missile stages on stage transporters in checkout tent.
- [redacted]
- Empty rollout-erector in two halves, present.
- Propellant vehicle set present, loaded.
- Other ground support equipment and general purpose vehicles present.
- [redacted]
- Missile airframe, systems, and monitoring and control equipment undergoing checkout.

~~SECRET/WNINTEL~~

1.4(A)(c)(H)

- Unit personnel bivouacked near launch site, [redacted]

[redacted]

Intermediate Level of Alert

- Missile erected on launch stand. Propellants loaded. Cherrypicker standing by for use by crew.
- Umbilicals attached.
- Missile and guidance set aligned. [redacted]
- Subsystem checkouts complete, crew monitoring status.

[redacted]

Highest Level of Alert

- Missile erected on launch stand. Propellants loaded, final guidance alignment completed, pad and apron cleared
- Umbilicals attached.
- Guidance set aligned and ready, [redacted]
- System checkouts and final checks complete, crew monitoring status, prepared to launch

[redacted]

~~SECRET/WNINTEL~~

CSS-4 ICBM/Silo, Hardened Basing

[redacted]

Day-to-Day Readiness

(See: Lowest Stage of Alert)

Lowest Stage of Alert

E.O. 12958 Sec. 1.4(b)

- Missile stages [redacted] vertical [redacted] in silo, door secure.
- Umbilicals and probably propellant loading lines attached to missile.
- Guidance set installed, missile and guidance set aligned and programmed to most likely target, stable platform calibrated[1], [redacted]
- [redacted]
- Missile airframe, systems, [redacted] and monitoring and control equipment undergoing checkout.
- [redacted]

[redacted]

[redacted]

1.4(A)(C)(H)

[redacted]

[redacted]

Intermediate Level of Alert

- Missile in silo. Propellants loaded. Work platforms may be in place. [redacted] Door secure.
- Umbilicals attached.
- Missile and guidance set aligned and programmed, stable platform calibrated, [redacted]
- Subsystem checkouts complete, crew monitoring status.

[redacted]

[redacted]

[redacted]

[redacted]

~~SECRET/WNINTEL~~ (b)(2)

TCS-600381/88

Highest Level of Alert

- Missile in silo. All propellants loaded, [redacted]. Work platforms retracted and secured. Door secure.
- Umbilicals attached.
- Missile and guidance set aligned and programmed, stable platform calibrated, [redacted]
- System checkouts, final checks complete, crew monitoring status, prepared to launch.

1.4(A)(C)(H) [redacted]

[redacted]

[redacted]

~~SECRET/WNINTEL~~

Appendix C

CSS-2 IRBM Operations at Regiment and Battalion Level (U)

Overview

~~(S-WN)~~ The CSS-2 IRBM system is described as mobile. [redacted] The system is actually transportable by road or rail, with a limited off road capability. Chinese publicity indicates the launch stand must be placed on a specially prepared stable surface, such as a concrete pad, rather than simply on any firm and level surface. [redacted]

1.4(A)(C)(H) ~~(S-WN)~~ [redacted] In addition, various headquarters and support elements [redacted]

[redacted]

Hardened Launch Complex Basing

~~(S-WN)~~ The typical original basing mode for a battalion with one launch unit was the [redacted]

Normal Operations and Regiment-Level Support

~~(S/WN)~~ The regiment provides support beyond the capabilities of the launch unit [redacted] including command and control communications, targeting calculations, weather reporting, engineering services, higher level maintenance services, and supply, including materiel and consumables. [redacted]

1.4(A)
(H)
(c)

[redacted]

Pg. 43 is denied in full

UNCLASSIFIED

Figure 35 (U) Automated Monitoring and Control Devices for Electric Power Generation and Distribution Equipment in a Missile Tunnel.

1.4(c)
(d)

[redacted]

E.O. 12958 Sec 1.4h

Ag. 45 is denied in full

[redacted]

1.4(A)
(C)

Lowest Level of Alert

(b)(5)
(b)(1)
1.4(C)
(A)

~~(S/WN)~~ The normal stage of readiness for units based in hardened facilities at the LSGs is the lowest level of alert. [redacted] The normal alert crew (duty shift) will be on duty, [redacted] This crew consists of personnel in sufficient numbers and skills to launch the missile successfully in an emergency [redacted]

Intermediate Alert

~~(S-WNF)~~ A prime mover will pull the missile airframe on its transporter out of the missile ready bunker. [redacted] will use a truck-mounted crane to transfer the airframe to the transporter-erector [redacted], which will be moved into place [redacted]

1.4(A) (C) (H)

[redacted]

~~(S-WNF)~~ Meanwhile, the propellant platoon of the launch battery will prepare for fueling operations. [redacted]

~~(S-WNF)~~ The command [redacted] launch battery will check out the launch control console. [redacted]

1.4(A)(C) (H)

[redacted]

~~(S-WNF)~~ Once the airframe is secured on the transporter-erector the launch battalion commander will direct the launch battery commander to move the missile and all essential equipment and personnel into position at the pad (figure 4-1). [redacted]

E.O. 12958 Sec 1.4(g)

E.O. 12958 Sec 1.4(g)

[redacted] The safety squad will monitor operations and will supervise or perform any activities involving radiation hazards, the conventional explosives and actuators. [redacted]

TCS 600381 88 (b)(2) [redacted]

[redacted]

1.4(A)(C) (H)

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~~(S-WN)~~ *A Technician Checks Out the Forward End of the CSS-2 Airframe Before Mating the Reentry Vehicle.* [redacted]

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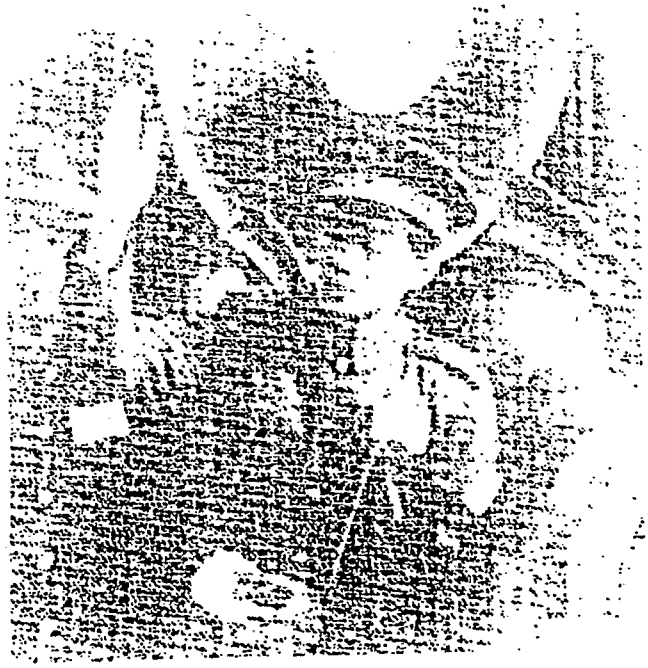

~~(S-WN)~~ *An Official, Probably the Launch Crew Commander of the CSS-2 Unit, Talks with Engineers or Observers at the Rear of* [redacted]

E.O. 12958 Sec.

Figure 42.

(~~S/WNF~~) [redacted]

1.4(A) (c) (H) The RV platoon, guidance platoon, and components platoon — all of the technical battery — will each reverify the condition of the missile.

E.O. 12958 Sec. 1.4 h

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[redacted]

Figure 43.

[redacted]

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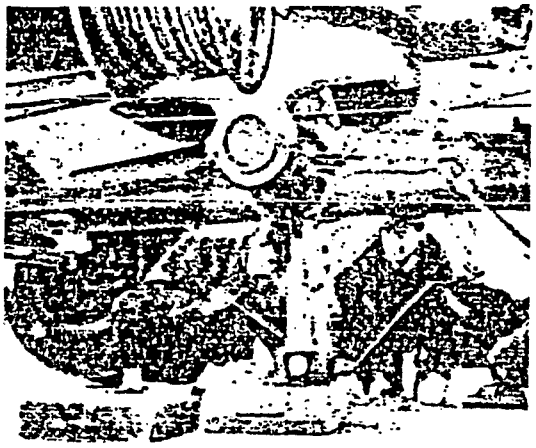

Figure 44. ~~(S/WN)~~ Device That Allows Lateral Shifting of the Loaded CSS-1 MRBM Transporter-Erector To Align It with the Launch Stand. [redacted]

1.4(A)
(c)
(H)

[redacted]

[redacted]

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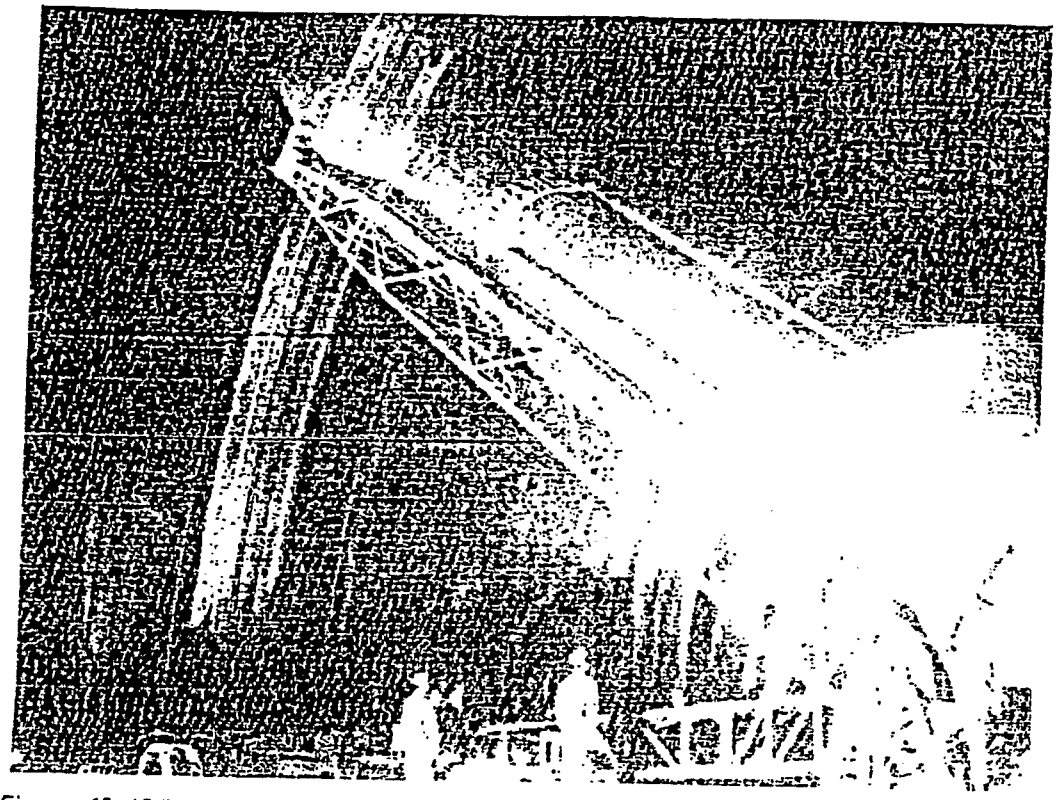

Figure 45. ~~(S/WNF)~~ Launch Unit Personnel Erect the CSS-2 Onto the Launch Stand.

1.4(A)
(c)
(H)

[redacted]

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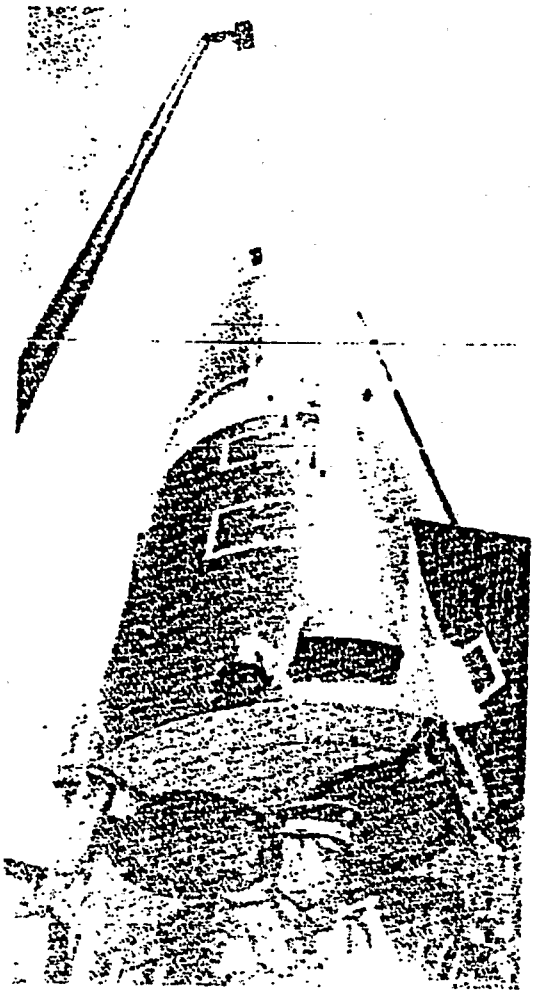


Figure 46. (~~S/WN~~) A Technician Guides a CSS-2 Onto Mounting Points During the Erecting Process. [redacted]

1.4(H)

UNCLASSIFIED

Figure 47. (~~S/WN~~) Members of the Launch Unit Erect a Mobile Lightning Arrester Before Beginning Fueling Operations. [redacted]

FOR OFFICIAL USE ONLY

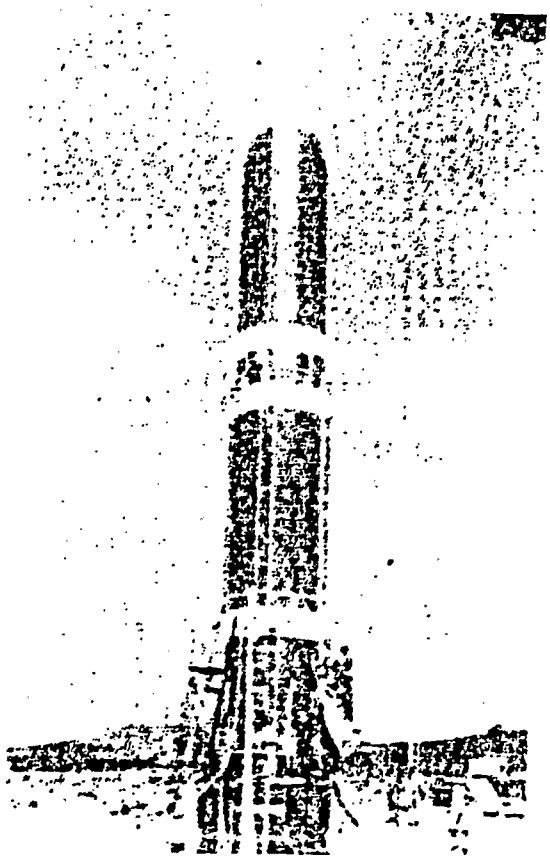


Figure 48. (~~S/WN~~) Technicians Attach Electrical Umbilicals and Fueling Hoses to the Erected CSS-2.

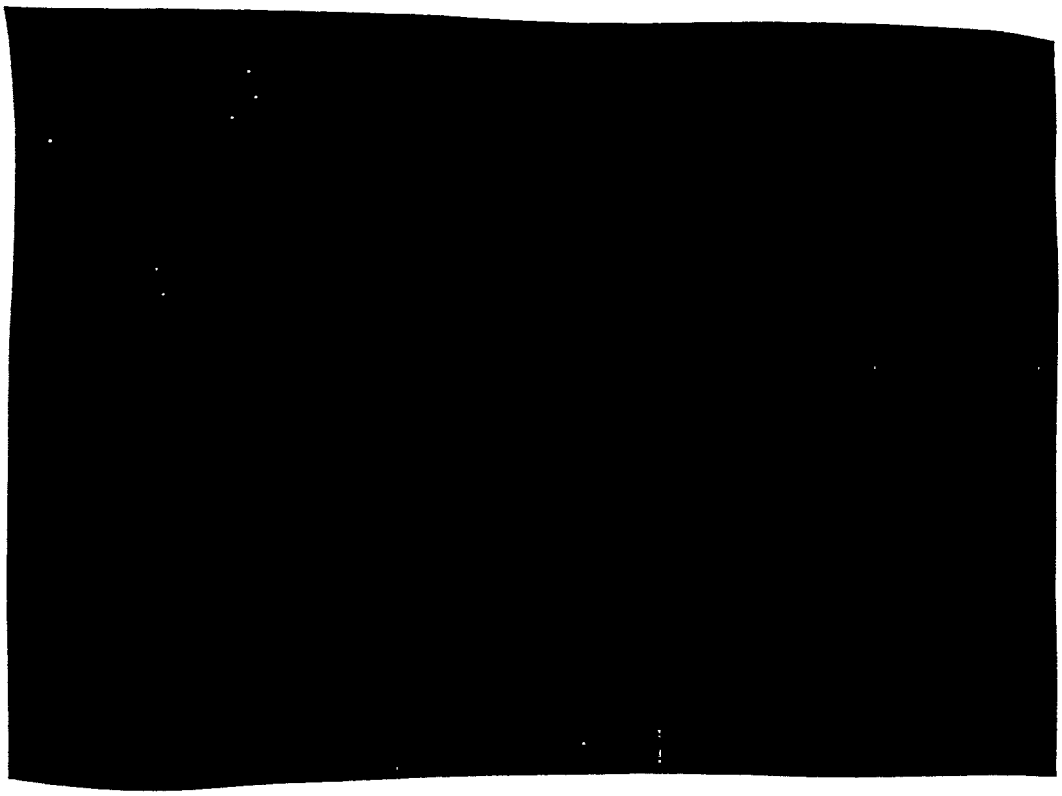
[redacted]

1.4(A)
(C)
(H)

UNCLASSIFIED

~~(S, WN)~~ *CSS-2 Launch Unit's Propellant Squad Ready to Load Propellants.*

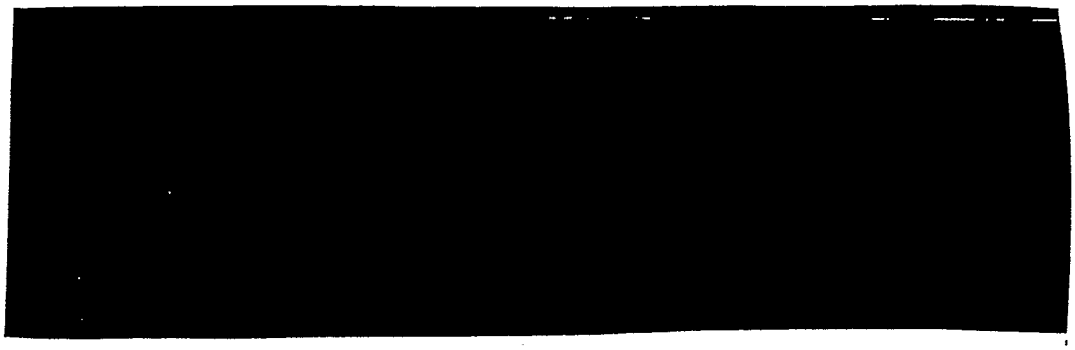
[redacted]



(U) Postlaunch or Refire Actions

(S/NF) CSS-2 units operating from LSGs probably have at least one refire missile and [redacted] available. The argument for this rests on the existence of an equipment storage tunnel that could accommodate one or more additional airframes plus considerable support equipment. Moreover, the additional tankage installed in the propellant storage caves is enough to fuel as many as four or five missiles. [redacted]

(S/NF) Following a successful launch, the launch unit most likely will secure its equipment and evacuate the launch position as soon as possible to avoid becoming a target [redacted] Finally, the unit will either evacuate or seek shelter and await orders from higher headquarters to reconstitute any available assets for subsequent launches or assistance to other units.



E.O. 12958 Sec. 1.4(h)

1.4(a) (c) (d)

~~(S-WN)~~ The technical battery will provide any necessary inspection and servicing of equipment [redacted] This will include repairs to the launch stand and replacement of umbilical cables on the stand. [redacted]

~~(S-WN)~~ Following all launch actions, the unit will take shelter in the hardened facilities, evacuate and disperse, or assist other launch units in the complex or in the field.

Field Garrison Basing

~~(S-WN)~~ "Field garrison" is a descriptive US term for a compact and remotely located operating base housing a surface-to-surface missile regiment in nonhardened buildings, including launch unit personnel, unit equipment, and regimental support functions, but containing no operationally usable launch pads [redacted]

[redacted]

E.O. 12958 Sec. 1.4(c) 1.4(h)

Normal Operations and Regiment-Level Support

~~(S/NF/WN)~~ Each launch battalion occupies its own portion of the garrison, although two battalions may form a "combat team" for such specialized purposes as training and administration. [redacted] Empty propellant vehicles are kept with the unit equipment; [redacted]

1.4(b) (c) (H)

[redacted]

EO 12958 Sec. 1.4h

[redacted]

1.4(A) (c) (H)

Wartime Operations, Reconstitution

[redacted]

- Remote field launch sites or field positions, consisting of prepared and camouflaged launch pads [redacted]

Pg. 58 is denied in full

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

~~(TSC)~~ The regiment will receive mobilization or dispersal instructions from higher headquarters.

[redacted]

[redacted]

1.4(A)(C)(H)

~~(S/WN)~~ Prior to deployment, the launch battalions and those support and headquarters functions to be deployed will inspect and marshal their equipment [redacted]

[redacted]

E.O. 13526 1.4(c)

(A) 1.4(c) (c)

[redacted]

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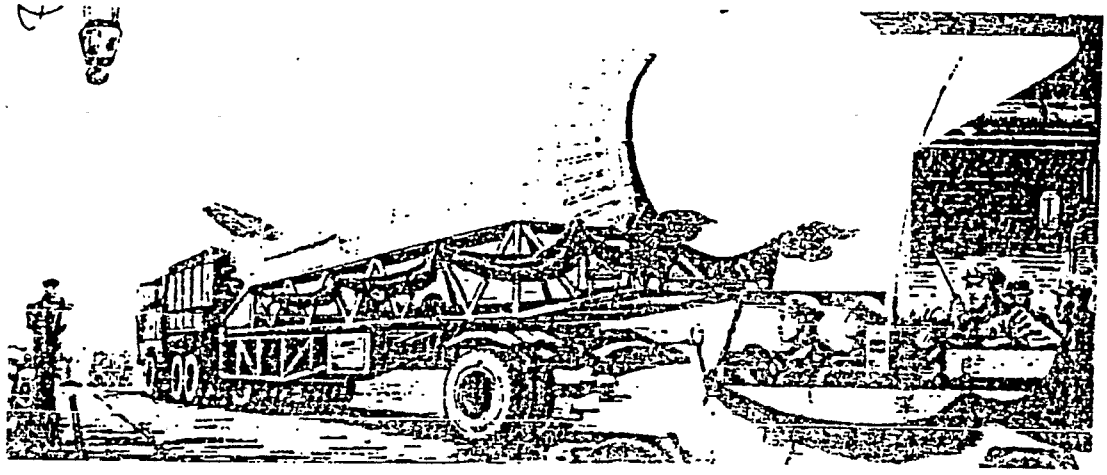

Figure 55. ~~(S/WN)~~ A CSS-2 Missile Unit Moving Out of Garrison [redacted] Depicted by a Chinese Military Artist.

1.4(A)(H)(G)

[redacted]

Dispersal Hold Area

~~(S/WN)~~ Use of a dispersal hold area would allow the regiment to escape its permanent garrison (a likely target in an enemy first strike) upon strategic warning, and to hide within reach of its intended launch sites without revealing those sites until ready for launch. [redacted] (h)(A) (c) (H)

[redacted] Exposure at the launch position would be necessary only if the operational orders required the units to stand by for launch. The principal limitations on maintaining a dispersal-hold posture are the reduced ability to conduct missile checkout and servicing without setting up facilities such as missile checkout tents [redacted]

[redacted]

Proceeding Directly to Launch Positions

~~(S-WNF)~~ Proceeding directly to the launch positions risks exposure before the counterstrike can be launched. [redacted] If the Chinese receive sufficient strategic warning (increased tensions, deteriorating relations, war threats, posturing, conventional and unconventional actions) to allow designated forces to disperse, their political objectives might require avoiding the provocative display of preparing missiles for launch. [redacted]

1.4(A) (C) (H)

Field Positions

~~(S-WNF)~~ The field position is a bare launch position with no permanent support facilities [redacted]

1.4(A) (C) (H)

~~(S-WNF)~~ Upon arriving at the field positions, the regiment will direct the launch battalions to their appropriate sites and establish a centrally located field headquarters. [redacted] In the meantime, each battalion will set up operations and attain the desired alert posture.

[redacted]

[redacted]

1.4(A) (C) (H)

Arrival at Site, Set Up, and Missile Checkout

~~(S-WNF)~~ The [redacted] site platoon of the launch battery will prepare and survey the site, identifying and checking missile alignment benchmarks.

[redacted]

~~(S-WNF)~~ The missile airframe will arive on its missile transporter. [redacted] launch battery, will set up the missile checkout and ready tent and will move the missile inside for detailed checkout.

[redacted]

[redacted]

Defensive Preparations

~~(S-WN)~~ [redacted] deployable missile units train with scenarios that include simulated conventional, nuclear, or chemical attacks. Operational procedures include protective measures to prepare for or minimize the effects of an attack, and reactive procedures after an attack to minimize or recover from damage.

Defensive Positions and Camouflage

~~(S-WN)~~ As soon as the battalion arrives at its field position, the preparation squad of the site platoon, and probably all other available personnel, will construct earth bunkers and revetments for all launch-essential equipment and personnel and will camouflage the site and equipment. [redacted]

Chemical and Nuclear Defense

~~(S-WN)~~ Each SSM regiment (brigade) has [redacted] element devoted to chemical (and probably nuclear) defense. [redacted] is probably divided up among the launch battalions for deployment, or at least trains and provides equipment to the battalions. Each battalion's personnel are trained and equipped for individual protection, and some personnel are trained and equipped to monitor conditions, direct protective actions, and decontaminate personnel and equipment. [redacted] along with personnel trained and equipped to provide basic medical assistance for casualties. The battalion's assigned equipment would be used as appropriate to recover from a chemical or nuclear attack. [redacted]

Training and Organizational Measures for Defense

~~(S-WN)~~ [redacted] Like the rest of the People's Liberation Army (PLA), the Second Artillery Corps is cross-training individuals in military occupational specialties. Its goal is expressed by the slogans "expert in one, trained in many," and "one soldier, many capabilities." Cross-training not only simplifies manning

problems and reduces personnel requirements, but also increases the chance that all launch-critical tasks can be performed despite casualties to the unit. The Second Artillery Corps is also emphasizing an integrated or team approach to operations, expanding the PLA term "combined arms combat" to include familiarizing each specialized team with the tasks of other teams. [redacted]

1.4(A) (C)

Redundancy and Reconstitution

[redacted] apparently still a major point of CSRF doctrine. [redacted]

[redacted]

Attainment of Alert Posture: Different Deployment Modes

~~(S/WN)~~ The procedures by which launch units attain a specified alert posture vary depending on the deployment mode, [redacted]

E.O. 12958 Sec. 1.4(A) (C)

[redacted]

~~(S, WNF)~~ For launch units operating at sites other than their "home base" LSGs, the available facilities would dictate the number and types of support vehicles essential for alert and launch operations. [redacted]

1.4(A) (C) (D)

~~(S, WNF)~~ For launch units operating at austere field sites, the full complement of missile support vehicles would be required, plus sufficient general purpose vehicles to support extended troop operations in the field. [redacted]

~~(S, WNF)~~ For launch units using hastily built, temporary, or portable launch pads from remote field sites, additional engineering equipment may be required. [redacted]

[redacted]

~~(S, WNF)~~ An article in [redacted] said that the two most important technical breakthroughs of 1985 by the Second Artillery Corps were discovering a way to increase the range of the CSS-2 IRBM without missile body modifications; and the development of a "steel plate swiveling launch platform" that "can be transported on a vehicle, deployed at random, and immediately dismantled after firing, greatly increasing units' mobile warfare capabilities." An article in [redacted] further described the new "launch stand": "Formerly missiles could be launched only from a fixed concrete pad, so the position was easily revealed, and mobility was also poor. Would it be possible to pull missiles around like artillery pieces and make them into [redacted]

[redacted]

1.4(a) (c) (d)

[redacted] The location was excavated and engineered to provide bunkers and revetments for troops and equipment, and a

[redacted]

(U) Similar exercises [redacted] The exercises were publicized in People's Liberation Army news media as a significant development in realistic training under simulated combat conditions.

[redacted] The launch area was prepared with personnel and equipment bunkers and revetments, allegedly constructed under simulated attack conditions by unit personnel.

Pg. 72 is blank. Pgs. 70-71 are being denied in full

Appendix D

CSS-3 ICBM Operations at Regiment and Battalion Level (U)

Deployment Modes

(S WN) The CSS-3 limited-range ICBM reached initial operational capability at two elevate-1975

1.4(A) (C) (H)

[redacted]

UNCLASSIFIED

Figure 62. ~~(S/WN)~~ A CSS-3 ICBM Airframe in an Elevate-to-Launch Silo.

[redacted]

Silo

(S/WN) China has [redacted] CSS-3 elevate-to-launch silos. [redacted]

1.4(A)
(G)
(H)

Rollout-to-Launch

(~~S/WN~~) The first continuous deployment of the rollout-to-launch version seems to have been in 1980, with new units entering the force at a very limited rate. The rollout-to-launch deployment mode was designed to overcome the disadvantages of the silo mode in the areas of vulnerability and expense. [redacted]

[redacted]

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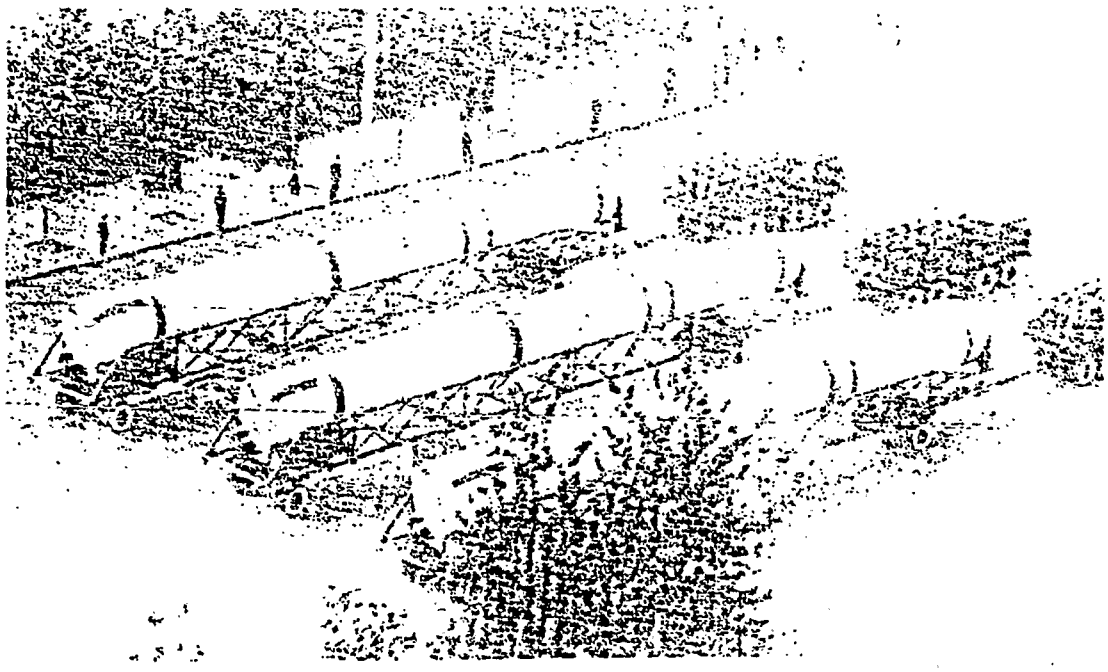

Figure 65. ~~(S/WN)~~ CSS-3 ICBM [redacted]

1.4(A) (C) (G) (H)

~~(S/WN)~~ At present, the only confirmed continuous deployment of the rollout version is in a garrison-based mode at the support base of one regiment (brigade). [redacted] An advantage of garrison-basing is that unit equipment and personnel are kept at a convenient support location, particularly in the case of the one regiment that operates in a remote area under extreme climate. [redacted]

[redacted]

Normal Operations — Silo Launch Units

~~(S/WN)~~ The CSS-3 silo launcher is a large and complex installation, consisting of an elevate-to-launch silo, a lower equipment access tunnel [redacted], a launch control center, and storage tunnels for each of the two liquid propellant components — fuel and oxidizer. [redacted]

[redacted]

1.4(A) (C) (G) (H)

EO 12958 Sec 1.4h, 1.4c

EO 12958 Sec 1.4h 1.4c

~~(S-WNF)~~ During day-to-day alert, operational personnel of the launch crew will conduct a daily or duty-shift inspection of the missile status, its physical condition, and the condition and status of all launch-essential support equipment. Technical personnel will conduct periodic technical inspections and checkouts, as well as troubleshooting and maintenance as necessary.

[redacted]

Wartime Operations — Silo Launch Units

~~(S-WNF)~~ Upon receipt of appropriate instructions, the battalion commander or launch crew commander will direct actions for increasing the launch readiness of the alert missile.

Lowest Level of Alert

EO 12958 Sec 1.4c, 1.4h

~~(S-WNF)~~ The missile may be kept at the lowest level of alert on a day-to-day basis. [redacted] the missile is not fueled, the umbilicals and probably fuel lines are attached. The guidance system is installed, and the missile and its guidance system are [redacted] probable target. [redacted] The alert crew is within the hardened facilities and represents the minimum number and skills necessary for

(b)(1)
1.4(A)
(C)
(G)
(b)(5)

successful launch of the missile. The missile is routinely monitored from consoles and by physical inspection. Routine checkouts and troubleshooting are conducted. [redacted]

Intermediate Alert

(~~S-WNF~~) Upon receipt of appropriate instructions, the battalion commander or launch crew commander will direct a change in the missile [redacted] He will also order the crew to fuel the missile and start the guidance system or bring it to a standby mode.

(b)(1)
1.4(A)
(G)
(C)
(b)(5)

(~~S-WNF~~) Propellant handling personnel will put on protective clothing and report to their duty stations. If the fueling lines are not attached, the personnel will attach them. They will then monitor the rapid transfer of propellants from site storage tanks into the missile tanks — the fuel and oxidizer will be handled separately. Displaced nitrogen purging gas will flow back from the missile to the site storage tanks or vent to the outside through relief lines. When fueling is completed, the personnel will detach and secure the fueling lines. [redacted]

(~~S-WNF~~) Additional personnel of the battalion will seek shelter inside the hardened facilities and augument the crew on duty. [redacted]

Highest Alert

(~~S-WNF~~) When directed, the crew will open the launcher closure doors, elevate the missile to the surface, and prepare for launch. [redacted] Once the missile is at the surface, the launch crew will perform final status checks on the missile and the guidance instruments and computer and will report the missile ready for launch. [redacted]

[redacted]

Reconstitution [redacted]

~~(S/NF/WN)~~ Following a successful launch, topside personnel will extinguish any burning material, allow the launch stand and elevator platform to cool, and use water from deluge hydrants to wash down any toxic material that may remain from the launch. The crew will lower the elevator platform back into the silo and close the launcher closure doors. Site personnel will examine and perform required maintenance on the launch stand and will replace damaged components such as the umbilical cables.

1.4(A) (C) (G) (1+)

EO 12958 Sec 1.4, 1.7

[redacted]

~~(U//NF)~~ Reconstitution resources are available in case of major malfunctions or damage from attack. Spares of some major essential items are stored in hardened facilities within or near the launch site. Heavy equipment appears to be available for site clearing or for reconstructing access routes in case of war damage or natural disaster. All personnel who survive an attack or natural disaster will be mobilized for reconstitution.

Normal Operations — Rollout Launch Units

~~(S/NF)~~ China has [redacted] CSS-3 rollout-to-launch sites, [redacted] consisting of a fixed pad and loading apron that contain essential portions of the missile erector mechanism; a missile-ready bunker or cave [redacted] propellant lines connecting each propellant bunker to the launch pad; and soft support buildings to support personnel, equipment, and operating and maintenance functions.

[redacted]

(S-WNF) The launch crew monitors the status of the missile by physical inspection, and electronically from the launch control center. The technical members of the launch unit periodically check out the missile and equipment, and provide troubleshooting and some maintenance. Members of the launch unit are assigned to duty shifts or alert crews, one of which is always on alert within the hardened facility and able to launch the missile unassisted in an emergency. The crew commander (who may be the battalion commander or his designated alternate) will be on duty

Wartime Operations — Rollout Launch Units

(S-WNF) A permanently occupied rollout site would normally operate at the lowest level of alert. The launch stand and missile would be in the bunker, ready to back out and erect; propellants would be available in the bunkers; and the minimum essential personnel would be on duty as a launch crew.

Lowest Level of Alert

E.O. 12958 Sec. 1.4(c), (h)

~~(S-WNF)~~ The missile stages [redacted] and resting on the rollout-erector, which is connected to a prime mover and is in the missile hold bunker. The missile is checked out and in service. It is purged with inert (nitrogen) gas and pressurized. The other essential vehicles are also in the bunker. [redacted] Propellants are available in the propellant bunkers. The lines are purged with inert (nitrogen) gas and pressurized. The launch control center and communications center (probably in the same area and adjacent to the missile hold bunker) are manned and operating. The site has electrical power and water furnished and operating. [redacted] A minimum essential crew is on duty in the hardened facility. [redacted]

(b)(1)
1.4(A)
(C)
(G)
(H)
(b)(5)

[redacted]

Intermediate Alert

~~(S-WNF)~~ Upon proper direction, the launch unit will assume an intermediate level of alert. All available personnel will report for duty. [redacted] The guidance system will be installed on the missile and maintained [redacted]

Highest Alert

~~(S WNF)~~ The blast doors will be opened on the missile hold bunker, and the launch-stand transporter will drive out to the launch pad, where unit personnel will unload and emplace the launch stand, and connect its tiedowns. The cherrypicker truck will also drive out. The prime mover will back out the missile on its rollout-erector and position it with the rear adjacent to the launch stand. [redacted]

~~(S WNF)~~ One propellant transfer vehicle will be connected into each of the two propellant lines at the place provided [redacted] Electrical connections will be installed between the launch stand umbilical connector and the launch control center [redacted] Unit personnel will operate the hydraulic mechanism to erect the missile on the launch stand [redacted] It will be lowered and removed from the apron, and the cherrypicker truck will be used to complete preparation of the missile. The electrical umbilical cords will be connected to the missile, and electrical monitoring will begin. [redacted]

(b)(1) 1.4(A) (C) (G) (H) (b)(5)

~~(S WNF)~~ Unit personnel will connect the fueling hoses [redacted] to the missile and load each propellant [redacted] into the two stages. [redacted] The nitrogen purging gas will be returned through a relief line either back through the propellant lines or vented into the atmosphere. Propellant safety personnel will stand by to supervise the operation. They will prepare to operate water deluge hoses if needed, and will ensure that all personnel properly use protective gear and conduct the fueling operation correctly. When the fueling is complete, the hoses will be disconnected and removed.

[redacted] Crew members will determine that the guidance set and guidance computer are operating properly. [redacted]

The missile will then be ready to launch.

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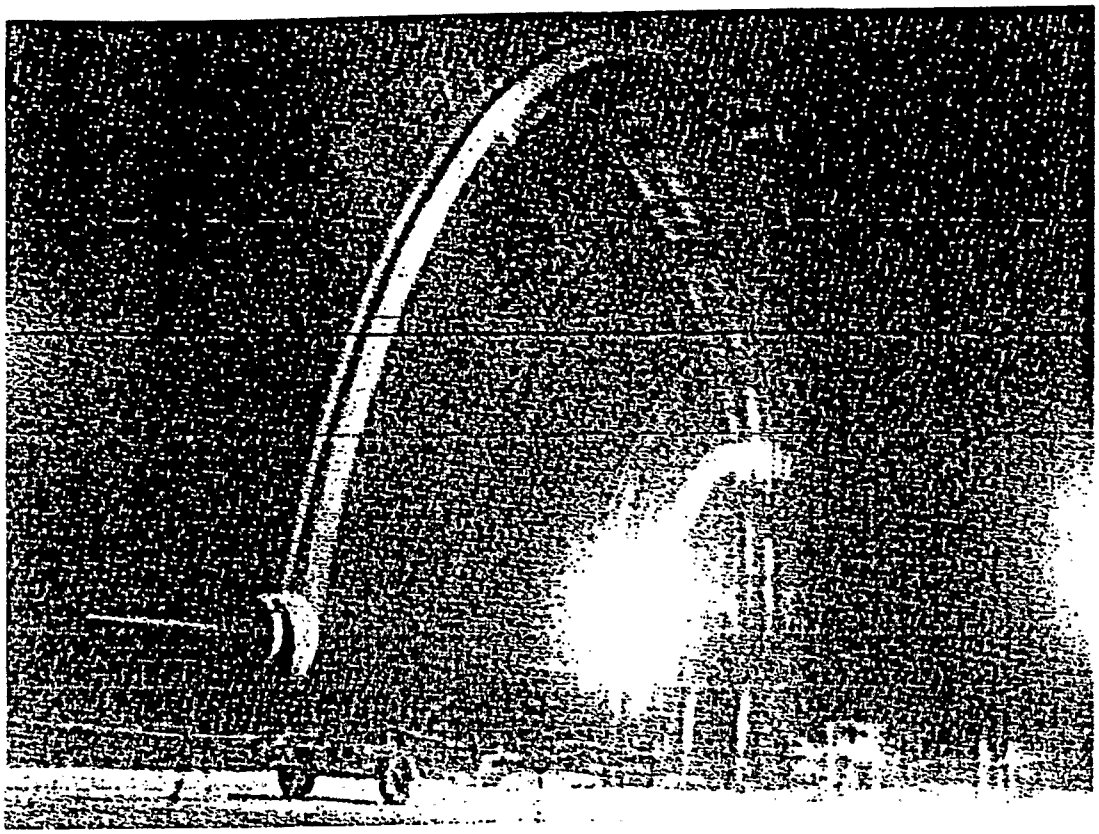

Figure 68. ~~(S/WNF)~~ Unit Personnel Erect the CSS-3 ICBM Onto the Launch Stand at a CSS-3 Rollout-to-Launch Site.

1.4(A)
(C)
(G)
(H)

Garrison-Based Operations — Rollout Launch Units

~~(S/WNF)~~ At least one CSS-3 regiment or brigade, [redacted] use a garrison-basing concept for CSS-3 rollout-to-launch units. [redacted] These launch units include the missile, personnel, and all necessary support equipment.

EO 12958
3.3(b)(1)

~~(S/WNF)~~ [redacted] Each launch unit appears to have sufficient propellant vehicles to transport propellants with the unit. [redacted]

Pg 83 is denied in full

(S-WNF) [redacted] the organization of CSS-3 rollout units appears to parallel that of CSS-2 units. [redacted]

(S-WNF) The operating doctrine for garrison-based rollout units keeps the launch unit on the support base during normal conditions, except for periodic training. Strategic warning, such as indications of possible hostility, will allow dispersal of the units away from base. [redacted]

(S-WNF) When units proceed to the launch sites, they will reestablish communications with the regiment headquarters. [redacted]

(S-WNF) Launch units will make the best possible use of facilities at the launch sites, particularly the missile-ready bunker or cave. Other facilities, such as the launch control center, communications center [redacted] and propellant bunkers or caves. [redacted] The unit is prepared to operate without any onsite facilities except the pad and apron, and [redacted]

(S-WNF) The missile, warhead, and monitoring and launch control equipment are carefully checked when they arrive at the site. Technical personnel perform the examination and

service the missile and equipment to ensure proper functioning following travel; they then turn the equipment over to the operations personnel or the actual alert launch crew.

[redacted] The propellants travel in a set of propellant vehicles similar or identical to the set used for the CSS-2. Additional requirements for the small second stage are within the capacity of the three fuel transporters and six propellant transporters. Additionally, one propellant transfer vehicle is required for each propellant component, and one or two water washdown trucks are used for safety.

~~(S-WNF)~~ Fueling operations are very similar to fueling operations for the CSS-2, taking the second stage into consideration. [redacted]

~~(S-WNF)~~ Missile handling is more complicated. Missile stage transporters are brought end-to-end — or else, possibly, the stages are lifted off the transporters onto portable handling dollies that operate on a short rail section — so that the stages can be mated. Once the stages are mated, a handling fixture (strongback) is attached to the airframe near the front and rear, and two truck-mounted cranes simultaneously lift the airframe onto the rollout erector [redacted]

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1.4(d)
(c)
(G)
(H)

[redacted] *Two Truck-Mounted Cranes Transfer a CSS-3 Airframe* [redacted]

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[redacted]

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1.4(c)

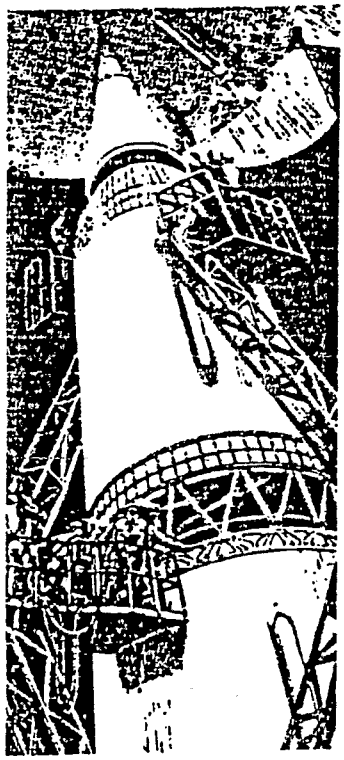

Figure 73. ~~(S/WN)~~ Chinese Military Artist's Conception. This print depicts emplacement of a CSS-4 ICBM in a Launch silo.

Pgs. 91-96 are denied in Full

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[redacted]

(U) This document contains Sensitive Compartmented Information (SCI) and collateral information. Individual portions are marked to indicate specifically the classifications and control markings applicable to their content, including WNINTEL when appropriate for collateral-level portions.

(U) Each classified title and heading has been properly marked; all those unmarked are unclassifed.

(U) This study was fully coordinated with the Directorates for Estimates, Scientific and Technical Intelligence, and Current Intelligence.

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[redacted]

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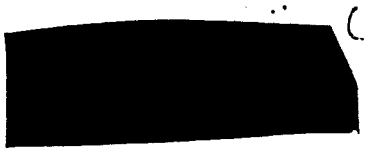

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